

## Data Sheet

# 1 FINITY™ T310 Transport Blade

20 × 10G client Muxponder optimized for 100G/200G metro applications

### T310 Transport Blade at a Glance

- Pluggable 1RU blade design
- 20 × 10 GbE/OC-192/OTU2/OTU2e (SFP+) client ports
- 2 × 100G/200G (CFP2-ACO) network plug-in units
- DP-QPSK and DP-16QAM modulation
- Web GUI, CLI script, SNMP or NETCONF management



### Product Overview

The 1 FINITY T310 transport blade offers a scalable, cost-effective, energy-efficient muxponder solution for providing up to 1 Tbps transport for 20 × 10G client services. The T310 offers pluggable optics on both client and network side, in addition to advanced Digital Signal Processor (DSP) functions, including network modulation options. As a result, the platform supports highly dense, metro-optimized transport. The T310 meets global compliance standards, including NEBS level 3.

### Modular Blade-Based Design

Designed to meet both central office and data center requirements, the modular 1RU design of the T310 optimizes the use of rack space and provides an open, simple, and scalable network architecture that easily accommodates rapid bandwidth growth.

The T310 provides coherent optical transport and supports dual power feeds, redundant replaceable fans, and an integrated virtual management control unit (vMCU) software for control and monitoring.

To reduce power consumption and increase density, the T310 supports the following pluggable optical transceivers:

- 20 SFP+ modules for 10 GbE/OC-192/OTU2/OTU2e client interfaces
- Two CFP2-ACO analog coherent optics for 100G/200G wavelengths

### Flexible Transport Features

The T310 offers software-selectable multimodulation modes, so that you can select the optimal density and optical span performance per wavelength for specific applications. The ability to select DP-QPSK or DP-16QAM modes enables a trade-off in optical reach versus capacity. Additionally, pluggable CFP2-ACO network optics provide flexibility and full C-band support at an attractive price point.

### 1 FINITY: A Revolutionary, Disaggregated Platform

For network operators seeking an open, simple, scalable architecture to meet escalating bandwidth demand, Fujitsu offers 1 FINITY, a revolutionary disaggregated platform that delivers unprecedented flexibility, scalability, and efficiency. Unlike the traditional converged systems other vendors provide, the programmable, blade-centric design of 1 FINITY offers a pay-as-you grow approach with low initial investment. Additional benefits include high rack space utilization, evergreen technology design, operational convergence, open pluggable optics, open APIs, and open protocols.

# 10 GbE Client-Side Connectivity

## For Metro to Long-Haul Applications

The T310 transport blade supports all metro and some regional transport applications and configurations. Dispersion compensation reach of up to 3000 km for DP-QPSK and 2300 km for DP-16QAM over standard SMF is supported. Auto-tuning between the network optics and the DSP ensure maximum OSNR for the network while taking advantage of the cost points of network pluggable optics.

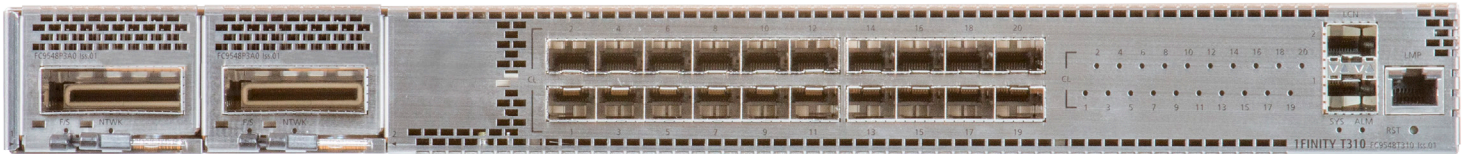
## Versatile Configurations

The T310 blade can be deployed in several equipment scenarios:

- As a point-to-point standalone muxponder
  - As a stackable muxponder for adding wavelengths beyond 100G to existing FLASHWAVE® 9500 or FLASHWAVE 7500 ROADMs— or as alien wavelengths on other ROADMs
- As part of an open optical network per standards with a different muxponder at each end

## Simplified Network Operations

The T310 blade employs a Linux-based operating system and can be managed via Web GUI, CLI script, SNMP or NETCONF API. The GUI or CLI script can provision numerous service options. The NETCONF management API makes it easy to use the T310 with SDN network controllers, such as Fujitsu Virtuora® NC.



2 × 100G/200G (CFP2-ACO) network ports

20 × 10 GbE/OC-192/OTU2/OTU2e (SFP+) client ports

# Technical Specifications

<b>Base System</b>	
System Configuration	1RU blade
PIU per Blade	2 line side
Local Management Port (LMP)	1 × 10/100 Mbps Ethernet RJ-45
Management Port (LCN)	2 × GbE SFP (T, SX, LX, EX, ZX)
Front LEDs	System Status, Alarm Severity, and Port
Fans	3 replaceable fans
Power Supply	Dual feed, fixed DC power supply
Software OS	Linux
<b>Line Optics</b>	
Line Ports per Blade	2
Line Rate	100G, 200G
Optical Module	CFP2-ACO
Optical Interface	96 C-band tunable ITU channels (50 GHz) 128 C-band tunable ITU channels (37.5 GHz)
Modulation	DP-QPSK      DP-16QAM
Chromatic Dispersion	±55,000 ps/nm
Minimum Required OSNR	11 dB      19 dB
Tx Wavelength	1528.77–1566.72 nm
Rx Wavelength	1528.77–1566.72 nm
AVG Reach w/ SMF-28 ULL Fiber (terrestrial)	3000 km      2300 km
<b>Client Optics</b>	
Client Ports per Blade	20
Optical/Electrical Interface	SFP+
Client Options	10 GbE, OC-192, OTU2, OTU2e
Supported Interfaces	SR, LR, ER
<b>Performance Monitoring</b>	
Service PMS	24-hour, 15-minute, untimed bins
OTN PMS	Yes
Thresholds and TCA	Support (user assignable)
<b>Management</b>	
Virtuora NC	Yes
Web GUI	Yes
CLI	Yes
NETCONF/YANG	Yes
SNMP	SNMP v2
Communications	SSH, SFTP, FTP, Telnet, HTTP, HTTPS
Timing	NTP
In-Band Management	GCCO (client and network ports)
OSMINE Support	CLEI
<b>Physical Characteristics</b>	
Dimensions H × W × D	1.75 × 19 × 17.72" (44.4 × 483 × 450 mm) W = 19" or 23" with mounting rails D < 23.6" (600 mm) with fiber management
Rack Compatibility	19" and 23" 2- and 4-post
Weight	Blade: 12.4 lb (5.62 kg)
<b>Operating Environment</b>	
Operating Temperature	+5 to +40 °C
Operating Humidity	5% to 85%
<b>Power</b>	
Power Supply	Dual feed, fixed DC power supply
120 V AC	No
-48 V DC	-40 V DC to -57 V DC
Power Consumption	224 W (typical)
<b>Regulatory and Compliance</b>	
FCC	FCC Part 15, Class A
NEBS	NEBS Level 3
UL and CB Safety	UL 60950-1 and IEC 60950-1
CE	CE
RoHS	RoHS
ETSI	EN 300-019, EN300-132, EN 300-753, EN 300-386
WEEE	WEEE
RCM	RCM
CDRH	FDA CDRH

**CLASS 1M CAUTION**

Invisible laser radiation: Class 1M laser product  
Do not view directly with optical instruments

**HAZARD LEVEL 1M CAUTION**

Hazard level 1M laser radiation

Do not view directly with non-attenuating optical instruments

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